

**Notice of Allowability**

Application No.

10/614,978

Examiner

Jeffrey L. Sterrett

Applicant(s)

PULLEN ET AL.

Art Unit

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1-64.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

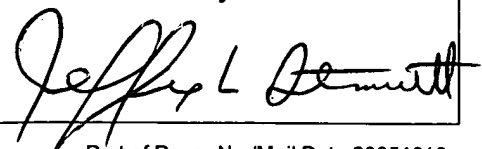
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 7/8/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

**Jeffrey Sterrett**  
**Primary Examiner**



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An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the Issue Fee.

### EXAMINER'S AMENDMENT

#### In The Drawings

Note attached copies of the drawings corrected in red.

### REASONS FOR ALLOWANCE

The claimed invention of a buck regulator controller is found to be allowable over the prior art since a buck regulator controller comprising regulated output voltage sensing circuitry generating a sensed signal proportional to the regulated output voltage; first adding circuitry generating a modified sensed signal from the addition of the sensed signal and a first voltage ramp; second adding circuitry generating a ripple reference voltage from the addition of a first reference voltage and a second voltage ramp; processing circuitry generating a modified reference voltage from the ripple reference voltage; comparing circuitry generating an output having a first logic state when the modified sensed output voltage is greater than the modified reference voltage and a second logic state when the modified sensed output voltage is less than the modified reference voltage; and control signal circuitry generating a signal having a first logic state during an ON time of the buck regulator in response to the comparator output, the regulator input voltage, and a second reference voltage wherein the regulated output is direct from the regulator input voltage during the ON time and the regulated output voltage is from stored regulator input voltage after the ON time was not found to be singularly or collectively taught by the prior art.

The claimed invention of a system utilizing a buck regulator controller is found to be allowable over the prior art since a buck regulator controller comprising regulated output voltage sensing circuitry generating a sensed signal proportional to the regulated output voltage; first adding circuitry generating a modified sensed signal from the addition of the sensed signal and a first voltage ramp; second adding circuitry generating a ripple reference voltage from the addition of a first reference voltage and a second voltage ramp; processing circuitry generating a modified reference voltage from the ripple reference voltage; comparing circuitry generating an output having a first logic state when the modified sensed output voltage is greater than the modified reference voltage and a second logic state when the modified sensed output voltage is less than the modified reference voltage; and control signal circuitry generating a signal having a first logic state during an ON time of the buck regulator in response to the comparator output, the regulator input voltage, and a second reference voltage wherein the regulated output is direct from the regulator input voltage during the ON time and the regulated output voltage is from stored regulator input voltage after the ON time was not found to be singularly or collectively taught by the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

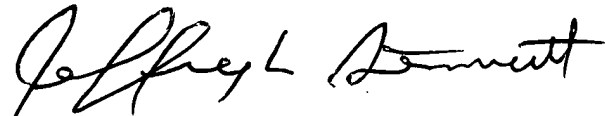
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Sterrett whose telephone number is (571)

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272-2085. The examiner can normally be reached on Monday-Thursday & 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571) 272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey L. Sterrett  
Primary Examiner  
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Approved  
10/18/05

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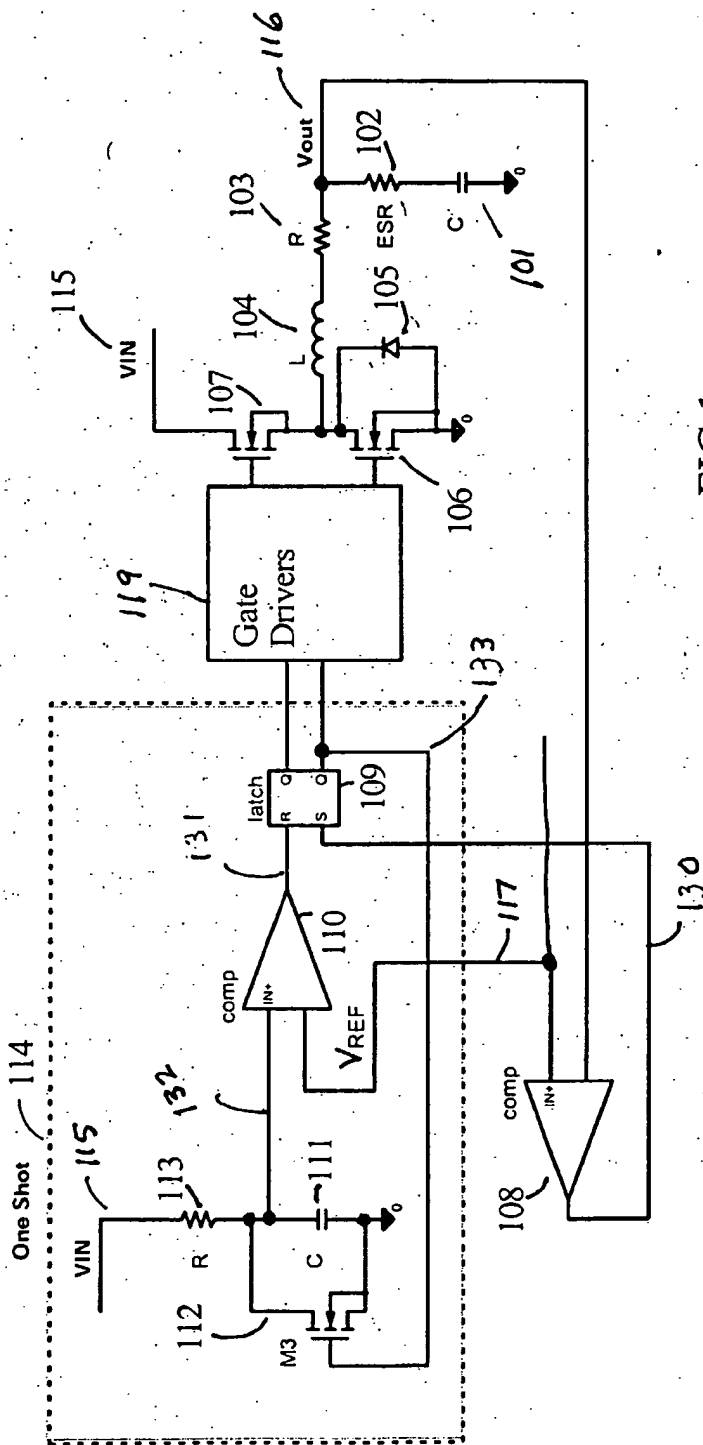


FIG.1

Prior Art

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200

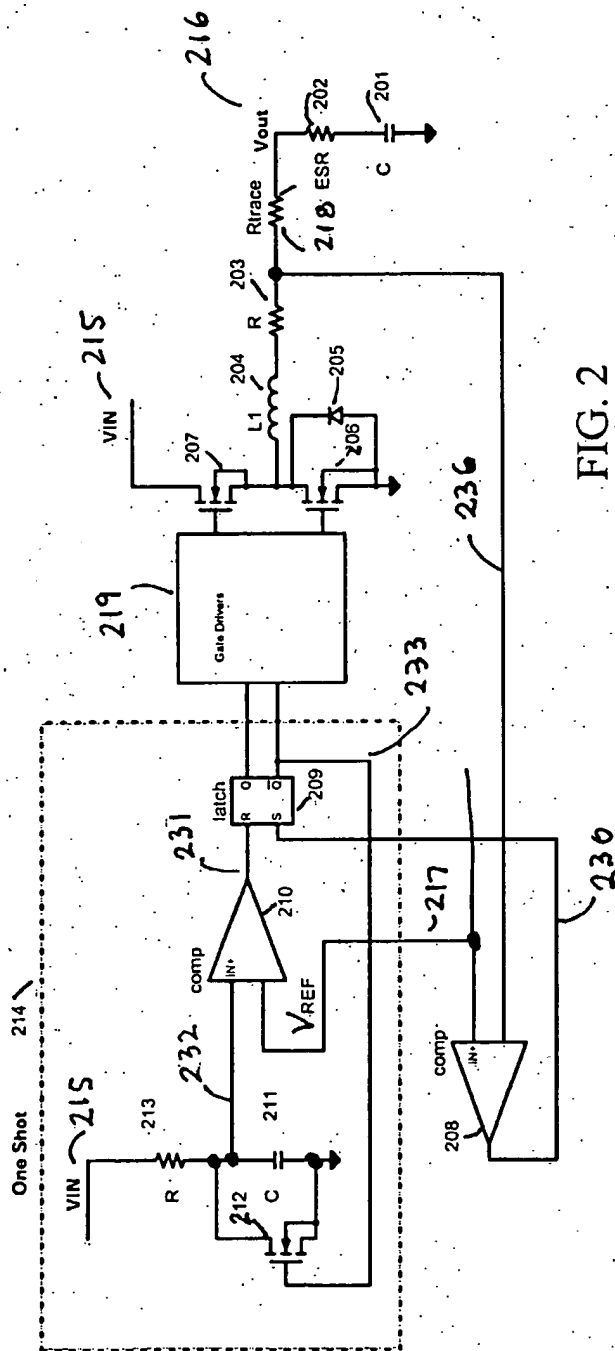


FIG. 2

Prior Art

300

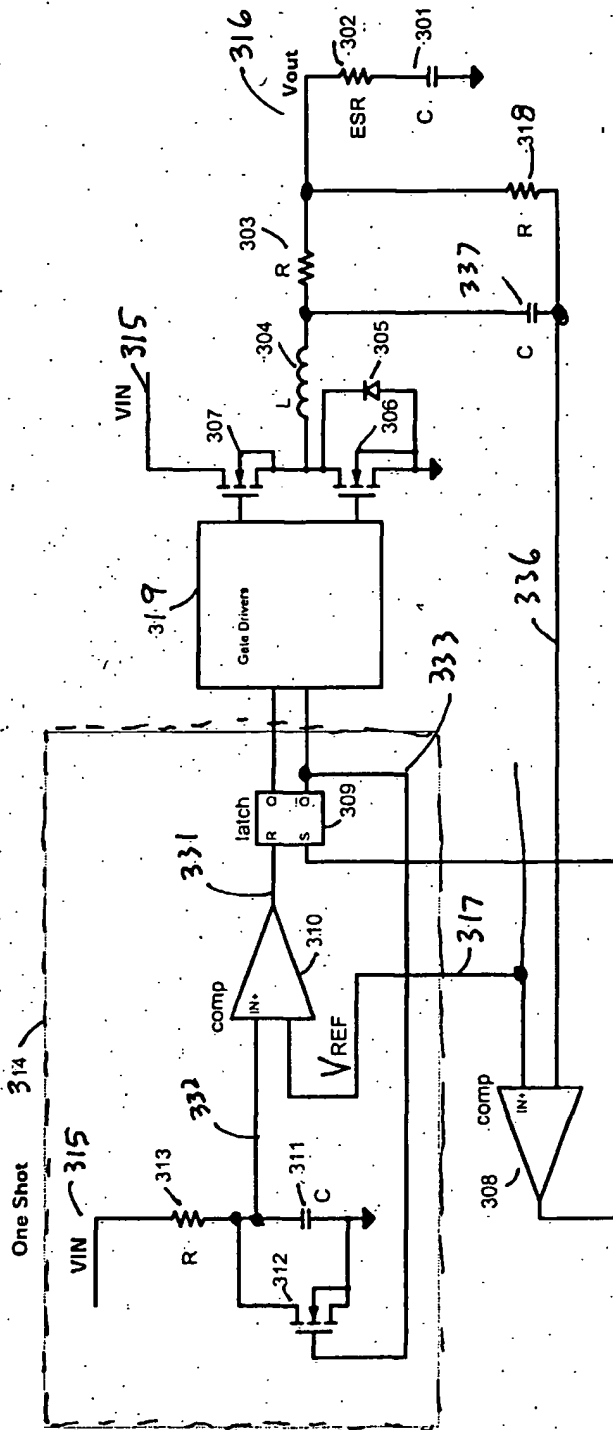


FIG. 3

Prior Art

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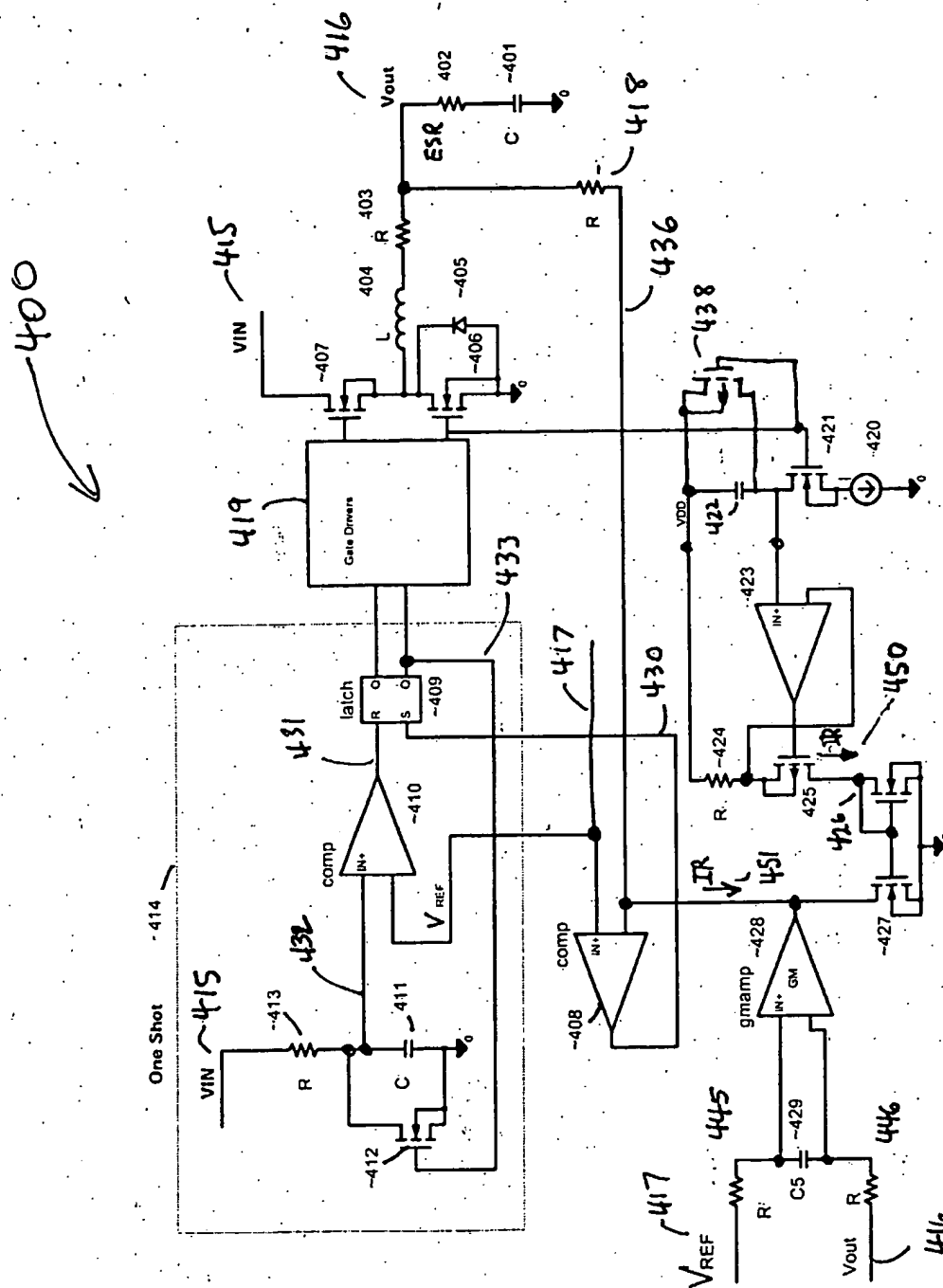


FIG. 4

Prior Art